

AMENDMENTS TO THE CLAIMS

1 **1. (Currently amended)** A surface effects skimmer comprising:

2 a main hull suitable for carrying at least one human occupant and having:

3 a bow of the main hull;

4 a stern of the main hull;

5 a port side of the main hull;

6 a starboard side of the main hull;

7 a centerline running between the bow and the stern; and

8 a hull bottom defining a tunnel open to the stern;

9 at least one rearward thrust for providing propulsion for the surface effects
10 skimmer, and

11 a downward air flow;

12 wherein the downward air flow is directed into the tunnel to reduce drag between
13 the hull bottom and an adjacent surface, and wherein the tunnel includes a bow end,
14 and wherein a Deflector Air Gate (DAG) is pivotally attached to the hull bottom near the
15 bow end of said tunnel, wherein the DAG pivots about a DAG axis orthogonal to the
16 hull centerline and substantially on the hull bottom, and wherein the DAG axis is
17 proximal to a bow most portion of the DAG.

1 **2. (Cancelled)** The surface effects skimmer of Claim 1, wherein the tunnel includes a
2 bow end, and wherein a Deflector Air Gate (DAG) is pivotally attached to the hull
3 bottom near the bow end of said tunnel, wherein the DAG pivots about a DAG axis
4 orthogonal to the hull centerline and substantially on the hull bottom, and wherein the
5 DAG axis is proximal to a bow most portion of the DAG.

3. **(Currently amended)** The surface effects skimmer of Claim 1 2, wherein the DAG
is pivotable between approximately zero degrees relative to the hull bottom to
approximately twenty degrees relative to the hull bottom.

4. **(Currently amended)** The surface effects skimmer of Claim 1 2, wherein the DAG regulates the downward air flow into the tunnel.

5. **(Original)** The surface effects skimmer of Claim 4, wherein the DAG is approximately the same width as the tunnel and the DAG is approximately square.

6. **(Original)** The surface effects skimmer of Claim 1, wherein the at least one rearward thrust comprises a port rearward thrust and a starboard rearward thrust.

7. **(Original)** The surface effects skimmer of Claim 1, further including at least one ducted fan creating an air flow, and wherein the at least one rearward thrust is derived from the air flow.

1 8. **(Original)** The surface effects skimmer of Claim 7, wherein the at least one ducted
2 fan comprises at least one port ducted fan creating a port air flow and at least one
3 starboard ducted fan creating a starboard air flow and wherein the at least one
4 rearward thrust comprises a port rearward thrust derived from the port air flow and a
5 starboard rearward thrust derived from the starboard air flow.

9. **(Original)** The surface effects skimmer of Claim 8, wherein the at least one port ducted fan comprises a port forward fan and a port rearward fan and the at least one starboard ducted fan comprises a starboard forward fan and a starboard rearward fan.

1 10. **(Original)** The surface effects skimmer of Claim 8, wherein:
2 the port ducted fan resides in a port ducted fan box and the starboard ducted fan
3 resides in a starboard ducted fan box; and
4 the port thrust emanates from a rear portion of the port ducted fan box and the
5 starboard thrust emanates from a rear portion of the starboard ducted fan box, and

6 further including:
7 a port thrust gate residing proximal to the rear portion of the port ducted fan box
8 and adapted to regulate the port thrust; and
9 a starboard thrust gate residing proximal to the rear portion of the starboard
10 ducted fan box and adapted to regulate the starboard thrust.

11. **(Original)** The surface effects skimmer of Claim 7, wherein the at least one ducted fan is powered by an automotive engine.

12. **(Withdrawn)** The surface effects skimmer of Claim 1, further including an air scoop creating a scoop air flow, and wherein the downward air flow is derived from the scoop air flow.

13. **(Original)** The surface effects skimmer of Claim 1, further including a port horizontal stabilizer residing proximal to the stern of the main hull and a starboard horizontal stabilizer residing proximal to the stern of the main hull.

14. **(Original)** The surface effects skimmer of Claim 1, further including port and starboard trolling motors for maneuvering at low speed.

15. **(Original)** The surface effects skimmer of Claim 1, further including a port outrigger extending outwardly to the port side of the main hull and a starboard outrigger extending outwardly to the starboard side of the main hull, wherein the outriggers are adapted to increase stability.

1 16. **(Original)** The surface effects skimmer of Claim 15, further including a port
2 outrigger tip extending downwardly from the port most edge of the port outrigger and a
3 starboard outrigger tip extending downwardly from the starboard most edge of the

4 starboard outrigger, wherein the outrigger tips are adapted to limit roll when the
5 outrigger tips contact the surface.

17. **(Original)** The surface effects skimmer of Claim 1, further including a port
outrigger extending outwardly on the port side of the main hull and a starboard
outrigger extending outwardly on the starboard side of the main hull, wherein the
outriggers are adapted to provide lift.

18. **(Original)** The surface effects skimmer of Claim 1, wherein the hull bottom
includes a stern projecting portion defining a tunnel stern portion of said tunnel, and
wherein the stern projecting portion defines a sharp stern pointing horizontal edge.

1 19. **(Original)** A surface effects skimmer comprising:
2 a main hull suitable for carrying at least one human occupant and having:
3 a bow of the main hull;
4 a stern of the main hull;
5 a port side of the main hull;
6 a starboard side of the main hull;
7 a hull centerline running from the bow to the stern; and
8 a hull bottom defining a tunnel open to the stern;
9 at least one port ducted fan for creating a port air flow;
10 at least one starboard ducted fan for creating a starboard air flow;
11 a downward air flow derived from the port air flow and the starboard air flow;
12 a port rearward thrust derived from the port air flow;
13 a starboard rearward thrust derived from the starboard air flow; and
14 a Deflector Air Gate (DAG) pivotably attached to the hull bottom near the bow
15 end of said tunnel, wherein the DAG rotates about an axis perpendicular to the hull
16 centerline,

17 wherein the downward air flow is regulated and directed into the tunnel by said
18 DAG to reduce drag between the hull bottom and an adjacent surface.

1 20 **(Cancelled)** A method for transporting humans over a surface in a vehicle, utilizing
2 surface effects, comprising:

3 creating a port air flow using a port ducted fan;
4 creating a starboard air flow using a starboard ducted fan;
5 generating a port thrust from the port air flow;
6 generating a starboard thrust from the starboard air flow;
7 controlling a Deflector Air Gate (DAG) to regulate a downward air flow derived
8 from the port air flow and the starboard air flow; and
9 containing the downward air flow in a tunnel defined by a bottom surface of said
10 vehicle, wherein the downward air flow is controlled by the DAG, a port tunnel edge
11 and a starboard tunnel edge.

1 21. **(New)** A surface effects skimmer comprising:

2 a main hull suitable for carrying at least one human occupant and having:
3 a bow of the main hull;
4 a stern of the main hull;
5 a port side of the main hull;
6 a starboard side of the main hull;
7 a centerline running between the bow and the stern; and
8 a hull bottom defining a tunnel open to the stern;
9 a port outrigger extending outwardly to the port side of the main hull and a
10 starboard outrigger extending outwardly to the starboard side of the main hull, wherein
11 the outriggers are adapted to increase stability;
12 at least one rearward thrust for providing propulsion for the surface effects
13 skimmer, and
14 a downward air flow;

15 wherein the downward air flow is directed into the tunnel to reduce drag between
16 the hull bottom and an adjacent surface.

1 22. (New) A surface effects skimmer comprising:
2 a main hull suitable for carrying at least one human occupant and having:
3 a bow of the main hull;
4 a stern of the main hull;
5 a port side of the main hull;
6 a starboard side of the main hull;
7 a centerline running between the bow and the stern; and
8 a hull bottom defining a tunnel open to the stern;
9 port rearward thrust and a starboard rearward thrust for providing propulsion for
10 the surface effects skimmer, and
11 a downward air flow;
12 wherein the downward air flow is directed into the tunnel to reduce drag between
13 the hull bottom and an adjacent surface.